ABSTRACT OF THE DISCLOSURE

At the time of (i.e., during) cranking of an internal combustion engine, an engine cranking-caused vibration suppressing apparatus and method controls the operation of an electric motor that cranks the internal combustion engine based on the rotational phase of the crankshaft detected by a crankshaft rotational phase detector so that the output torque of the motor fluctuates similarly to fluctuations in resistance torque against the cranking of the engine that the crankshaft presents in accordance with the rotational phase thereof. Thus, the apparatus and method are able to suppress vibrations during the cranking of the engine, leading to improvements in the riding comfort and the noise suppression of a vehicle.